

Claims

1. A method for separating sugars, sugar alcohols, other carbohydrates and mixtures thereof from a solution containing at least two of them, **c h a r a c t e r i z e d** in that the method comprises at least one step in which
5 weakly basic anion exchange resin is used in the chromatographic separation.
2. The method of claim 1, **c h a r a c t e r i z e d** in that the solution containing sugars, sugar alcohols and other carbohydrates is fed into a chromatographic column containing weakly basic anion exchange resin, eluting said column with an eluant and separating and recovering a product and/or
10 products.
3. The method according to claim 1 or 2, **c h a r a c t e r i z e d** in that weakly acid cation exchange resin is also used in a chromatographic column.
4. The method according to any one of claims 1 to 3, **c h a r a c t e r i z e d** in that strongly acid cation exchange resin is also used in a chromatographic column.
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5. The method according to claim 1 or 2, **c h a r a c t e r i z e d** in that the weakly basic anion exchange resin is an acrylic-based resin.
6. The method according to claim 1 or 2, **c h a r a c t e r i z e d** in that the weakly basic anion exchange resin is based on a resin selected from the group consisting of polystyrene resins, epichlorohydrin-based anion exchange resins, aminated products of phenol or formaldehyde resins, aliphatic amines and ammonia polycondensation resins.
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7. The method according to claim 1 or 2, **c h a r a c t e r i z e d** in that the resin is crosslinked with an aromatic crosslinker.
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8. The method according to claim 7, **c h a r a c t e r i z e d** in that the resin is crosslinked with divinylbenzene.
9. The method according to claim 8, **c h a r a c t e r i z e d** in that the crosslinking degree is from about 1 to about 10 weight-% divinylbenzene.
10. The method according to claim 9, **c h a r a c t e r i z e d** in that the crosslinking degree is from about 3 to about 8 weight-% divinylbenzene.
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11. The method according to claim 1 or 2, **c h a r a c t e r i z e d** in that the resin can be crosslinked with an aliphatic crosslinker, such as isoprene, 1,7-octadiene, trivinylcyclohexane, diethylene glycol divinylether, N,N'-methylenebisacrylamide, N,N'-alkylenebisacrylamides, ethyleneglycol dimethacrylate, di-, tri-, tetra-, pentacrylate or pentamethacrylate.
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12. The method according to any one of the preceding claims, **characterized** in that the temperature of the column, the feed solution and the eluant is between 10 and 95°C.

13. The method according to any one of the preceding claims, **characterized** in that the temperature of the column, the feed solution and the eluant is between 40 and 95°C.

14. The method according to any one of the preceding claims, **characterized** in that the particle size of the weakly basic anion exchange resin is from 10 to 2000 micrometers, preferably from 100 to 400 micrometers.

15. The method according to any one of the preceding claims, **characterized** in that the pH of the feed solution is on the acidic side of the pH range.

16. The method according to any one of the preceding claims, **characterized** in that the eluant is water, an aqueous solution, an alcohol or a mixture thereof.

17. The method according to claim 16, **characterized** in that the eluant is water.

18. The method according to claim 17, **characterized** in that the eluant is condensate water.

19. The method according to any one of the preceding claims, **characterized** in that the sugars to be separated are monosaccharides, disaccharides, trisaccharides or oligosaccharides.

20. The method according to claim 19, **characterized** in that the monosaccharides to be separated are pentose, hexose, tetrose monosaccharides, deoxyhexose, deoxypentose or anhydroalditols.

21. The method according to claim 19, **characterized** in that the disaccharides to be separated are tetrose, pentose or hexose disaccharides.

22. The method according to any one of the preceding claims 1 to 18, **characterized** in that the sugar alcohols to be separated are xylitol, erytritol or inositol.

23. The method according to any one of the preceding claims, **characterized** in that the other carbohydrates to be separated are polyols.

24. The method according to any one of the preceding claims 1 to 18, **characterized** in that sugars and sugar alcohols are separated from betaine.

25. The method according to any one of the preceding claims 1 to 5 19, **characterized** in that the separated sugar is rhamnose.

26. The method according to any one of the preceding claims 1 to 19, **characterized** in that the separated sugar is maltose.

27. The method according to claim 22, **characterized** in that the separated sugar alcohol is inositol.

10 28. The method according to claim 23, **characterized** in that the separated polyol is glycerol.

29. The method according to any one of the preceding claims, **characterized** in that the method is a batch process.

30. The method according to any one of the preceding claims, 15 **characterized** in that the method is a simulated moving bed system.

31. The method according to claim 25, **characterized** in that the simulated moving bed system is continuous.

32. The method according to claim 25, **characterized** in that the simulated moving bed system is sequential.